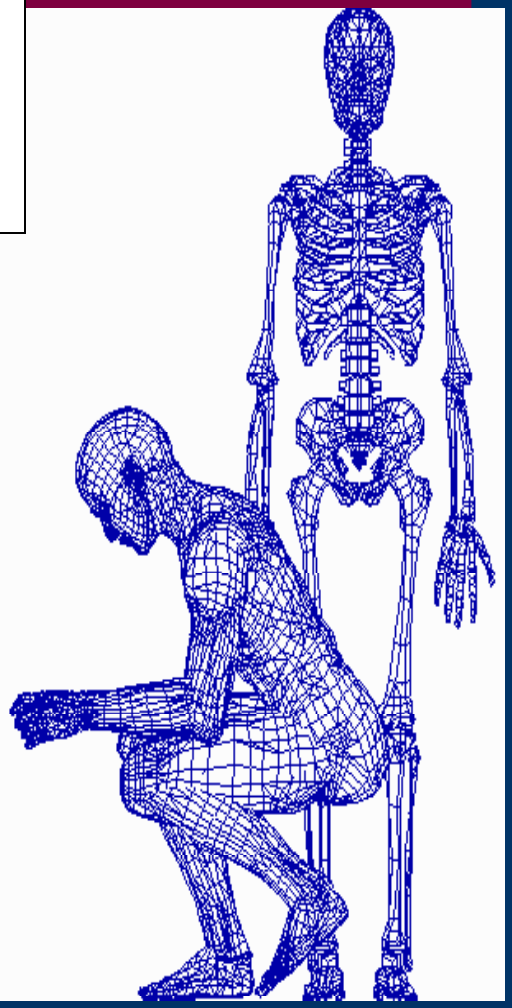
Safe Patient Handling & Movement



VAMC Tampa, FL
Web: patientsafetycenter.com

Overview of Program of Research in SPHM

1994 RUG: Nursing Back Injuries

1995 Identified high risk nursing tasks in SCI & LTC

1998 Funding for Biomechanics Research Lab

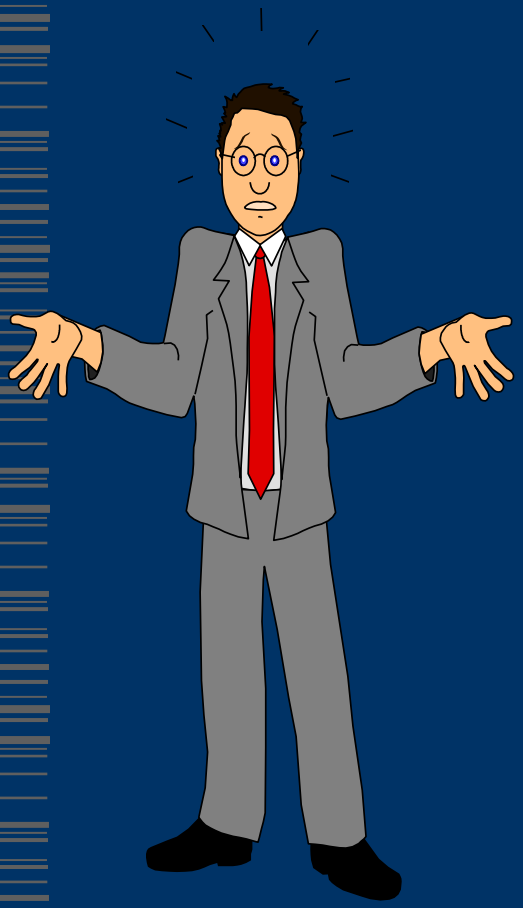
1998 Redesigned high risk tasks, Expert Panel

1999 Design Evidence-Based Program

2001 Field testing program elements with 700 nursing staff

2002 Patient Care Ergonomics Guide

Common Myths



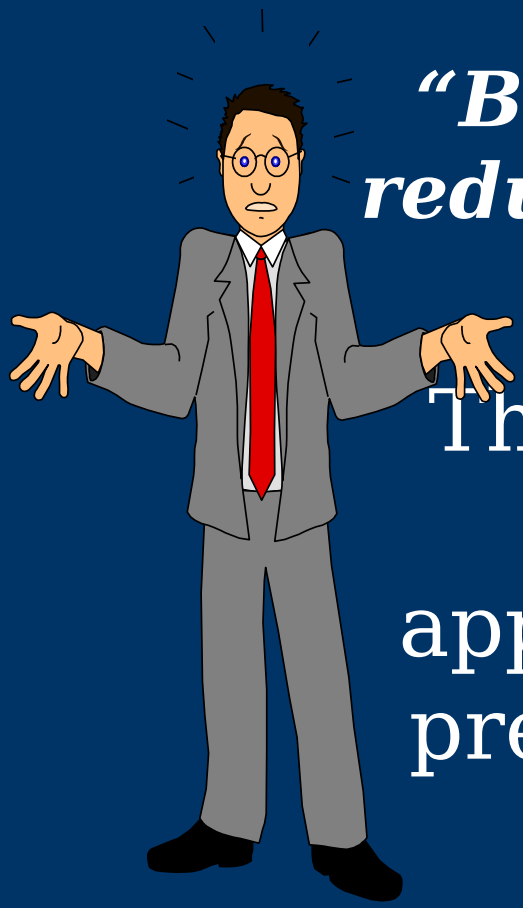
"Classes in body mechanics and lifting techniques are effective in reducing injuries".

20+ years of experience shows us training alone is not effective.

Show me the Evidence!

- Brown, 1972
- Dehlin, et al, 1976
- Anderson, 1980
- Daws, 1981
- Buckle, 1981
- Stubbs, et al, 1983
- St. Vincent & Teller, 1989
- Owen & Garg, 1991
- Harber, et al, 1994
- Larese & Fiorito, 1994
- Lagerstrom & Hagberg, 1997
- Daltroy, et al, 1997

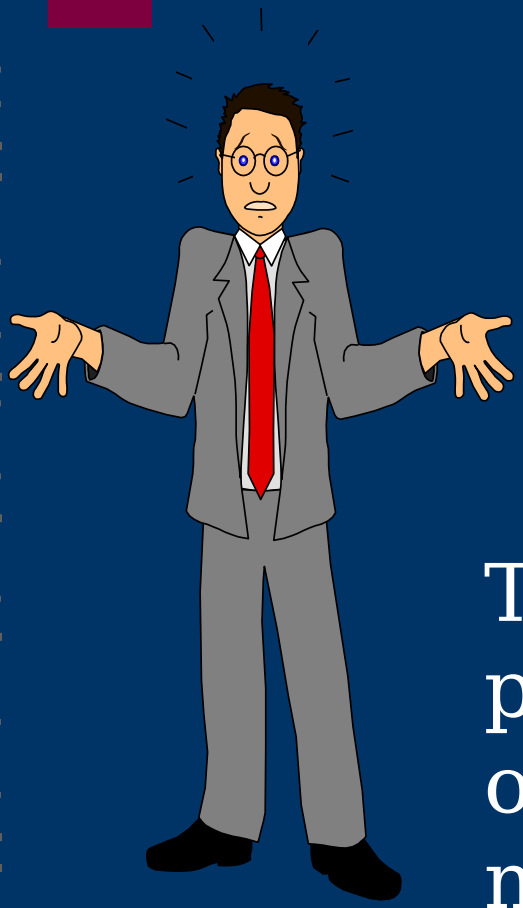
Common Myths



"Back belts are effective in reducing risks to caregivers".

There is no evidence back belts are effective. It appears in some cases they predispose nurse to higher level of risk.

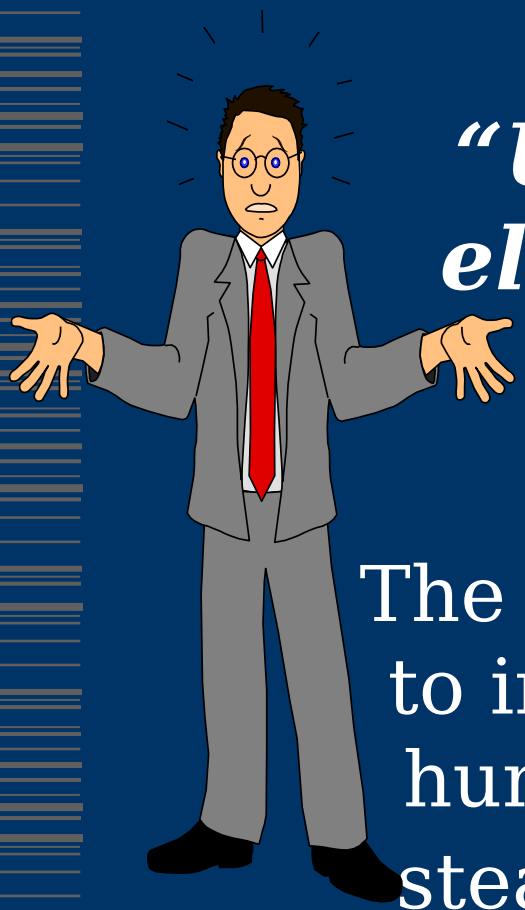
Common Myths



"Patient Handling Equipment is not affordable".

The long term benefits of proper equipment FAR outweigh costs related to nursing work-related injuries.

Common Myths



"Use of mechanical lifts eliminates all the risk of manual lifting".

The patient must be lifted in order to insert the sling. Furthermore, human effort is needed to move, steady, and position the patient.

Common Myths

"If you buy it, staff will use it"

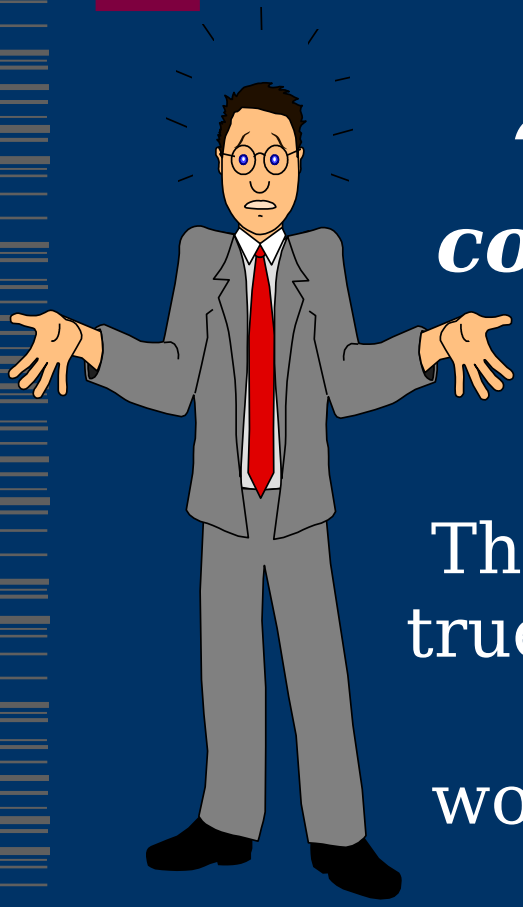
Reasons staff do not use equipment: time, availability, time, difficult to use, space constraints, and patient preferences.

Common Myths

"Various lifting devices are equally effective".

Some lifting devices are as stressful as manual lifting. Equipment needs to be evaluated for ergonomics as well as user acceptance.

Common Myths



"Staff in great physical condition are less likely to be injured".

The literature supports this is not true. Why? These staff are exposed to risk at a greater level; co-workers are 4X more likely to ask them for help.

Program Elements

1. Ergonomic Assessment Protocol
2. Patient Assessment Criteria
3. Algorithms
4. Back Injury Resource Nurses
5. State-of-the-art equipment
6. After Action Reviews
7. No-Lift Policy

Patient Assessment Criteria (p.69)

- Integrated into nursing assessment
- Includes items such as:
  - Ability of the patient to provide assistance.
  - Ability of the patient to bear weight.
  - Ability of the patient to cooperate and follow instructions.
  - Height and weight
  - Special Considerations

Algorithms for High Risk Tasks (p.75+)

- Linked to Patient Assessment Criteria
- Six algorithms developed for high risk patient handling and movement tasks
- Standardizes decisions for # staff and type of equipment needed to perform the task safely.
- To implement, need the right equipment on each unit

Developed Algorithms

1. Transfer to and from: Bed to Chair, Chair to Toilet, Chair to Chair, or Car to Chair
2. Lateral Transfer To and From: Bed to Stretcher, Trolley
3. Transfer To and From: Chair to Stretcher, or Chair to Exam Table

Developed Algorithms

4. Reposition in Bed: Side-to-Side, Up in Bed
5. Reposition in Chair: Wheelchair and Geriatric Chair
6. Transfer a Patient Up From the Floor

Back Injury Resource Nurses (BIRNs) (p. 93+)

- New Education Model: Credible Peer Leader
- Selected for each high risk unit
- Provide ongoing hazard identification
- Assure competency in use of equipment
- Implement algorithms

Key Points: BIRNs

- Classes in Body mechanics and training in lifting techniques are not effective.
- Successful for increasing clinician buy-in
- Build in Maintenance of program elements
- Need to build incentives due to competing demands on unit
- High cost makes this a strategy targeted for high-risk units only

Examples of Problems Identified

- High number injuries on night shift. Discovered lifts not being used because they did not have back up battery packs and the lifts were being recharged on nights.

  Solution: Buy extra battery packs so lifts could be used 24 hours/day.

- Lifts not being used because there were inadequate numbers of slings.

  Solution: Buy extra slings—as well as specialty slings for amputees.

Examples of Problems Identified

- Equipment not used because it was purchased without staff involvement and did not work well on that unit.

  Solution: Involve staff and pilot with patients.
- Broken equipment being used

  Solution: Develop routine maintenance program.
- Frequent injuries related to transporting patients from SCI to main hospital– ¼ mile uphill on stretcher weighing 400+ pounds with patient on it.

  Solution: Buy one motorized stretcher.

Technology Solutions
(p. 47+)

- The Right Equipment
- In sufficient Quantity
- Conveniently located
- Well Maintained

Friction Reducing Devices and Lateral Transfer Aids

Powered Patient Transporters

Ceiling-Mounted Lifts

Evaluation of a Ceiling Mounted Patient Lift System

- Setting: 60 bed NHCU (high risk)

- The purpose of this 18-month evaluation was to measure the impact of the lift on a single long-term care unit on:
  - Staff injuries
  - Staff satisfaction
  - Cost

Data: Ceiling-Mounted Lifts

18 Months:

- Incidence of injuries slightly lower
- **Days Lost decreased by 100%**
- Staff satisfaction very high
- Patient satisfaction very high

Cost Benefit

- **Investment:**
  - **33 lifts, scales and 65 slings = $108,000**
  - **(including installation)**

- **Return:**
  - **Equipment costs recovered in 2.5 years**
  - **Ten year life equipment translates into savings of $300,000+**
  - **Intangible benefits include higher nurse morale, lower turnover, and higher patient satisfaction**

Evaluation of Program Elements

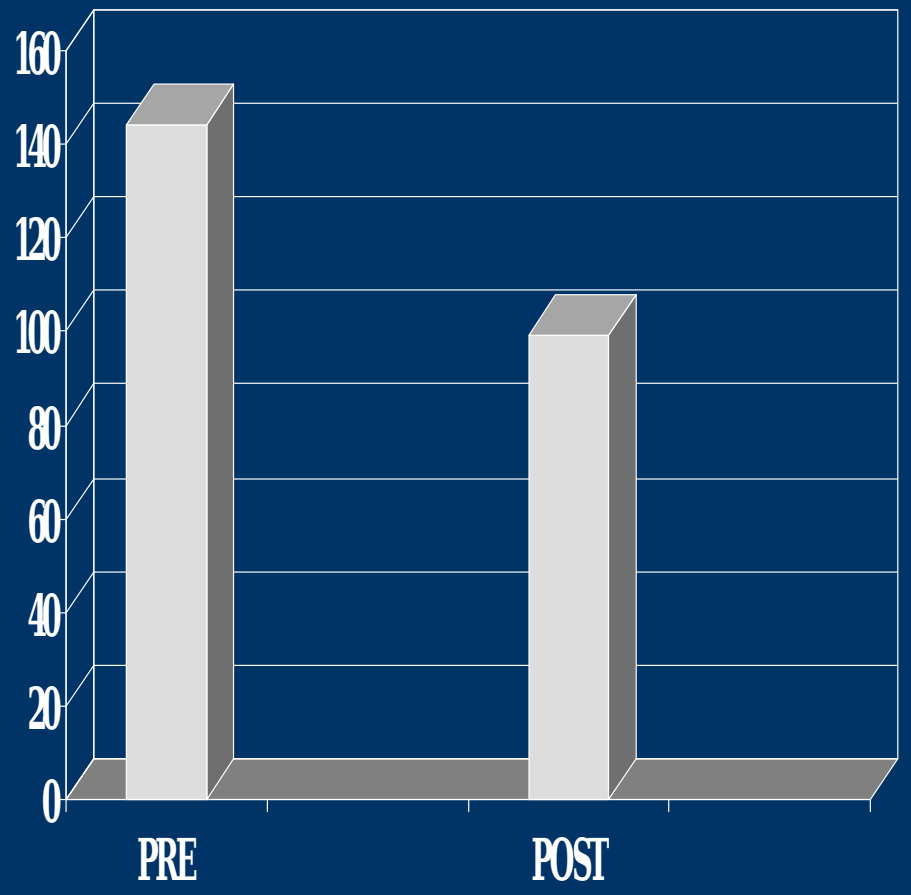
Results of a Multi-Site Study to evaluate all program elements

Study Design

- Design: Prospective cohort design with pre- post evaluation
- Sample: 783 nursing staff from 23 high-risk units at 8 VA facilities

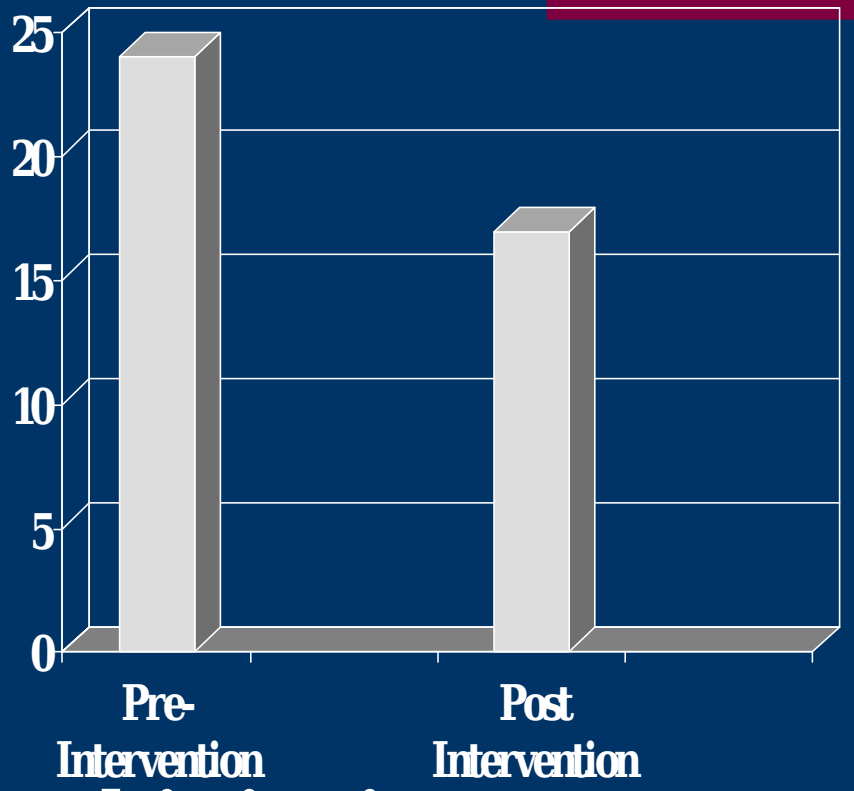
Results: Incidence of Injuries

- **Decreased 31%**
- **From 144 injuries to 99 injuries**
- **Significant at 0.003 level**



Results: Injury Rates*

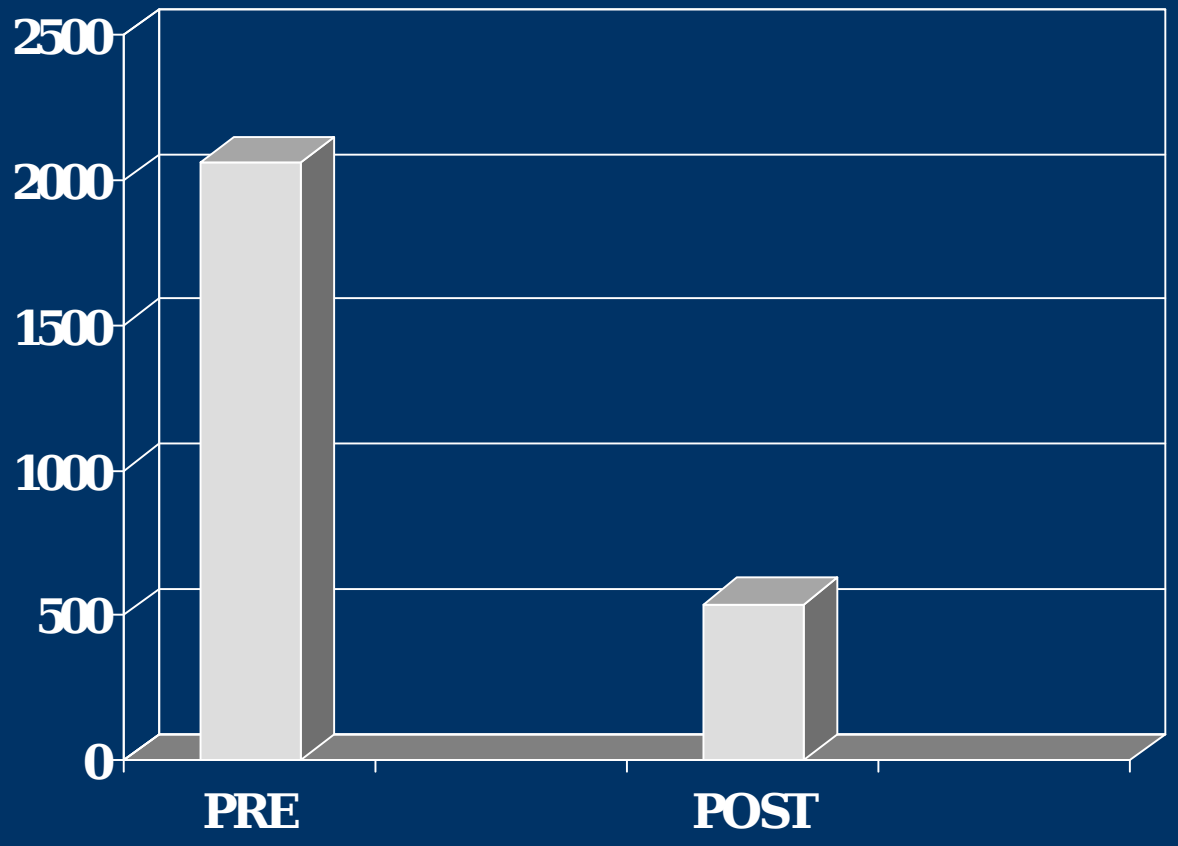
- Decreased from 24 to 16.9
- Difference was significant at 0.03 level



***Defined as # reported injuries/ # hours worked, for 100 workers/year**

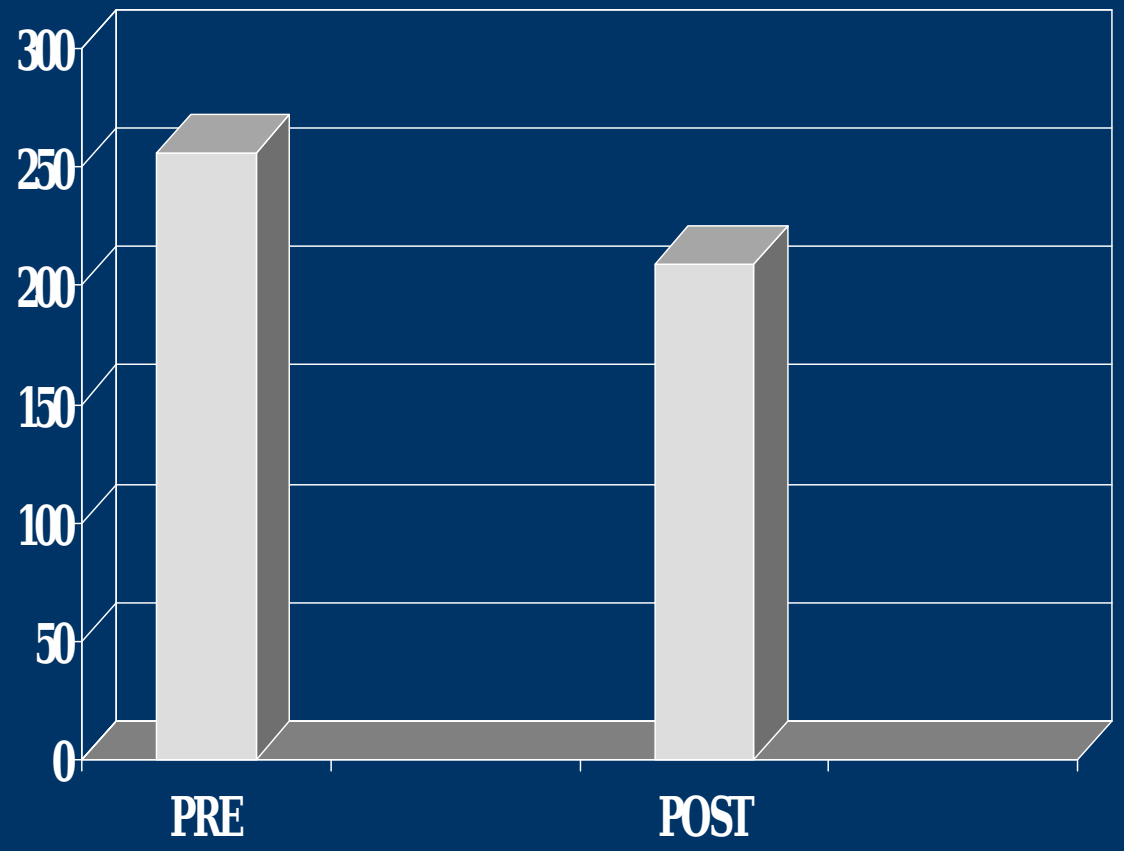
Results: Modified Duty Days

- **Decreased 88%, from 2061 days to 256 days**
- **Significant at 0.01 level**



Results: Lost Work Days

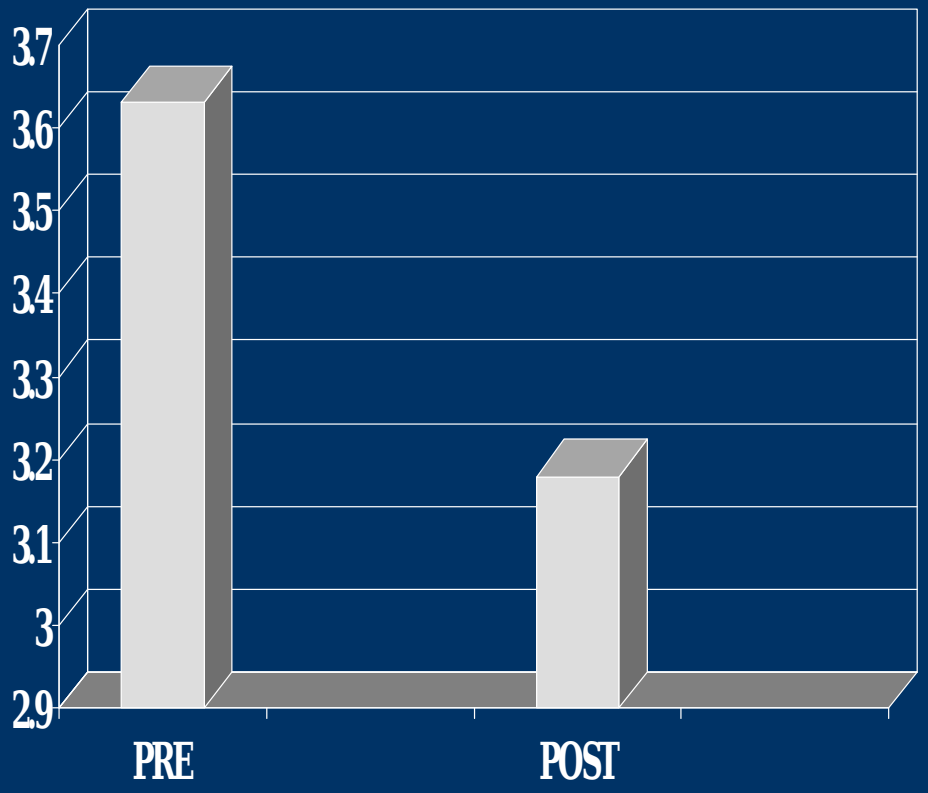
- **Decreased 18%, from 256 to 209 days**



Results: Self-Reported Unsafe Patient Handling

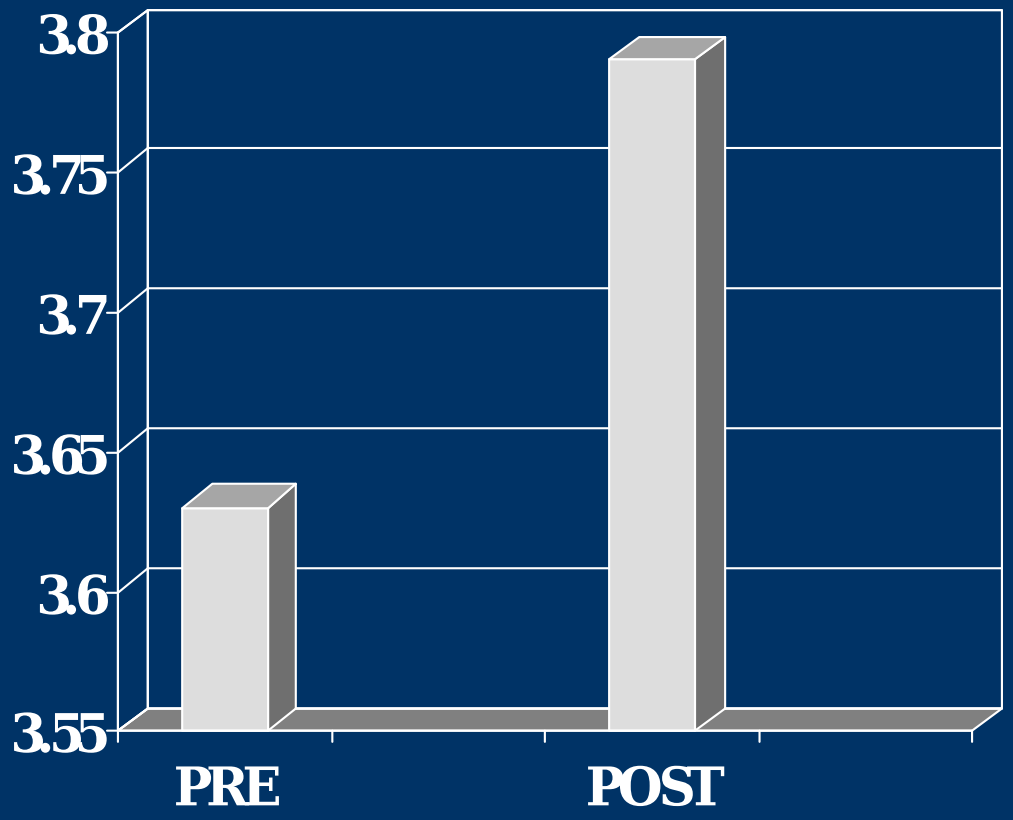
- **The # times/day nurses handled or moved patient in unsafe manner decreased from 3.63 to 3.18.**

- **Significant at the 0.1 level**

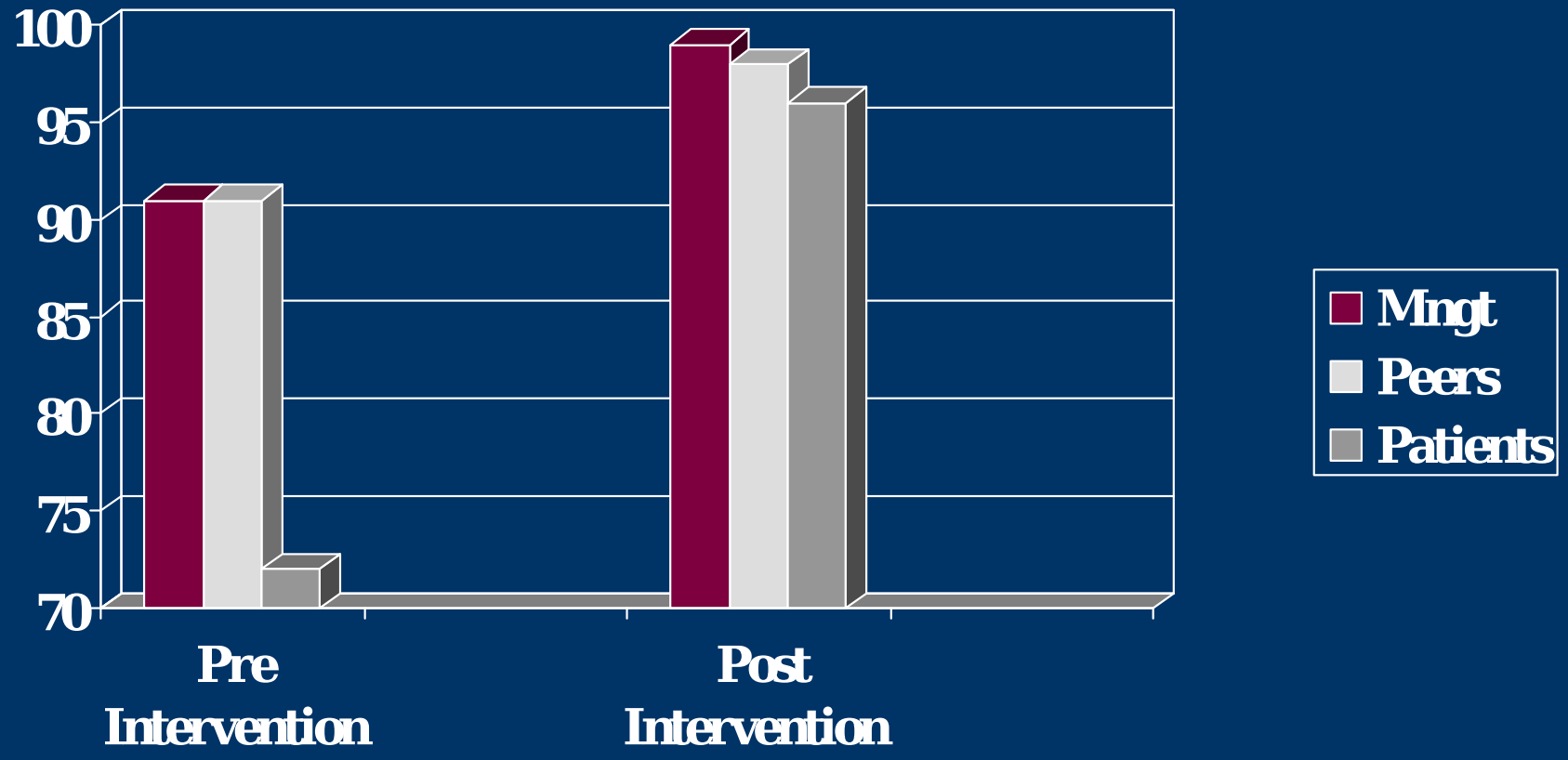


Results: Job Satisfaction

- **Pay**
- **Professional Status****
- **Task Requirements****
- **Autonomy**
- **Organization Policy**
- **Interaction**



Results: % Support Perceived by BIRNs for SPHM Program



Cost Benefit of Program

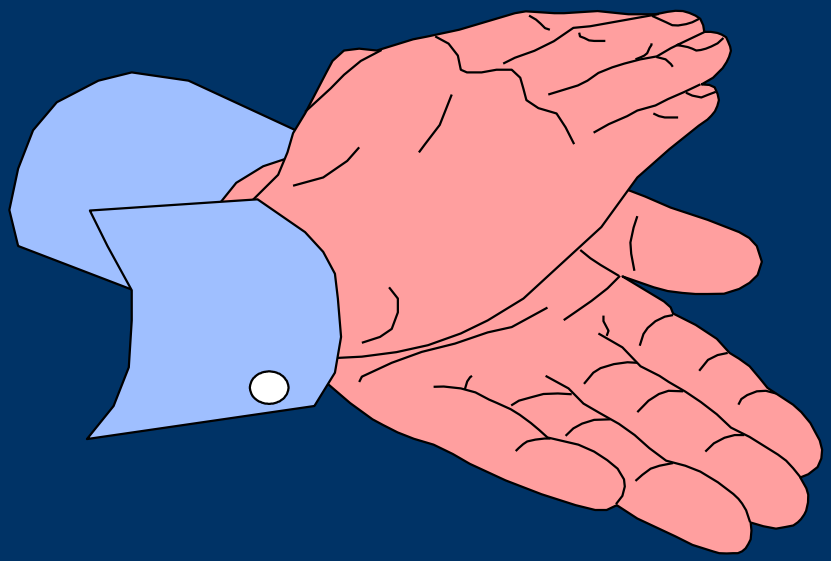
- Direct Cost Savings in Year 1 was $127,000
- Projected Cost Savings over 10 years: $2 million

*Cost: equipment, training, medical treatment, lost workdays, modified workdays, Worker's Compensation costs.

Conclusions

- The program significantly reduced the incidence and severity of injuries.
- The program was very well accepted by nursing staff, administration, and patients.
- Job satisfaction was significant increased.
- There were significant monetary benefits, associated with decrease in lost/modified work days and lower medical and cash payments due to injuries.

The End.....



(Audience applauds wildly)